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10/684,345	10/10/2003	Daniel Nicholas Crow	5437-66659	9222

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EXAMINER

HECK, MICHAEL C

ART UNIT PAPER NUMBER

3623

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/684,345

Applicant(s)

CROW ET AL.

Examiner

Michael C. Heck

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 17-19, 21-27 and 29 is/are pending in the application.
- 4a) Of the above claim(s) 17-19 and 21-23 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 24-27 and 29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/1/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Final Office Action is responsive to applicant's amendment filed 01 September 2005. Applicant canceled claims 13-16, 20 and 28, amended claims 1, 2, 5-12, 17, 21-22, 24, 26 and 27, and added new claims 29. Currently, claims 1-12, 17-19, 21-27 and 29 are pending.

Election/Restrictions

2. Newly submitted (amended) claim 17 and the respective dependent claims 18-19 and 21-23 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Original claim 1 was for a system for returning a number of job candidates based on a current query specifying a desired criteria for the job candidate, that is the query is predefined and then is used to match against job candidates' data. The original claim 17 was a computer-implemented method of identifying desirable job candidates by extracting concepts from job candidate data of a desirable job candidate as desirable job candidate criteria and then submitting the desirable job candidate criteria for matching against other job candidates. The amendment to claim 17 further claims "wherein the extracting is implemented by a computer and comprises invoking a plurality of criteria-determining software components, wherein each of the criteria-determining software components is adapted for independently extracting different types of concepts". Claim 17 now uses a concept extractor to independently extract different type of concepts using a job candidate data that describes a desired job candidate, which in turn creates the desired criteria for

matching as used in claim 1. That is, claim 1 is for matching job candidates to a desired criteria and claim 17 is for creating the criteria using a concept extractor, which are independent or distinct inventions.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 17-19 and 21-23 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Response to Amendment

3. The objection to the drawings in the last Office Action has not been overcome by the applicant's amendment to the drawings and specifications. Please see the drawing objections below.
4. The objection to the specification in the last Office Action has been overcome by the applicant's amendment to the specification.
5. The objection to the claims in the last Office Action has been overcome by the applicant's amendment to claims 2, 26 and 27.
6. The 35 USC §112 second paragraph rejection in the last Office Action for claim 28 has been overcome by the applicant's amendment to the claims. The applicant canceled claim 28.

7. The 35 USC §101 rejection in the last Office Action for claims 1, 3-11, 17-23, 26 and 28 have been overcome by the applicant's amendment to the claims to include canceling claims 20 and 28.

Response to Arguments

8. Applicant's arguments with respect to claims 1-12 and 24-26 have been considered but are moot in view of the new ground(s) of rejection. Applicant asserts that Puram et al. (U.S. Patent 6,289,340) fails to teach or suggest that a computer system can automate the process of query modification by "generating a proposed modification to the current query" as recited in claim 1. In response, Puram et al. teach that through automated data processing by a computer device, the candidates records are searched to find a sub-pool of candidates that possess the skills listed by the employer as desired for the position. Puram et al. further teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skills and skill level to fit the needs profile. If the number is too small, the system conducts the search again based on the self-assessed skill levels (Figures 3 and 4, col. 7, lines 4-47).

Drawings

9. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 610, 1130 and 3100.

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10. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 1140.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. **Claims 1-12, 24-27 and 29** are rejected under 35 U.S.C. 102(b) as being anticipated by Puram et al. (U.S. Patent 6,289,340). Puram et al. disclose matching job candidate information comprising:

- **[Claim 1]** determining whether the number of job candidates matching a current query is outside the given range, wherein the determining is performed by a computer system (Abstract, Figures 3 and 4, and col. 7, lines 4-47, Puram et al. teach that the system selects candidates from a pool of candidates to fill a position based on the skills held by the candidate. Through automated data processing by a computer device, the candidates' records are searched to find a sub-pool of candidates that possess the skills listed by the employer as desired for the position. The search will only return those candidates whose skills profiles match or exceeds specified criteria. The search for a sub-pool may generate too many or too few candidates. The Examiner interprets that an upper and lower number is established in order for the system to measure and determine too many or too few.); and
- responsive to determining the number of job candidates is outside the given range, generating a proposed modification to the current query predicted to bring the number of job candidates within or closer to the given range, wherein the generating is performed by the computer system (col. 7, lines 4-47, Puram et al. teach that through automated data processing by a computer device, the candidates records are searched to find a sub-pool of candidates that possess the skills listed by the employer as desired for the

- position. A feedback process counts the number of candidates in the sub-pool and allows for modifications to yield a smaller or larger sub-pool. After an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skills and skill level to fit the needs profile. If the number is too small, the system conducts the search again based on the self-assessed skill levels.).
- **[Claim 3]** generating a new query incorporating the proposed modification (col. 7, lines 21-47, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool.).
 - **[Claim 4]** generating search results via the new query (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. Once a sub-pool of satisfactory size is identified, the next task is to determine which of the adequate candidates has skills and experience that most closely match what is needed or desired of the position.).
 - **[Claim 5]** generating the proposed modification comprises invoking a plurality of match forecasting methods calls according to a defined order for invoking the method calls. (col. 7, lines 4-20, Puram et al. teach a preferred method of finding this sub-pool involves searching all candidate records to find those that possess some threshold level of experience in the "core strengths" (i.e., those skills that are of the highest priority) for a position. Preferable this step of establishing the sub-pool also involves comparison of the candidate's preference data to the position data, and comparison of the company's global hiring rules or preferences to weed out any candidates

that are not available, would not be interested in the position and/or do not meet the company's general hiring criteria. A feedback process counts the number of candidates in the sub-pool and allows for modifications to yield a smaller or larger sub-pool. After an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skills and skill level to fit the needs profile. If the number is too small, the system conducts the search again based on the self-assessed skill levels. The Examiner interprets the process of searching involves different datasets that are searched in a defined order.).

- **[Claim 6]** identifying a component of the current query having a fully open range; and generating the proposed modification to indicate that the fully open range be constrained (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill.).
- **[Claim 7]** ranking skills appearing within job candidates matching the current query according to a ranking scheme; and choosing a highly-ranked skill of the skills appearing within the job candidates matching the current query as the component of the query to be constrained (col. 5, lines 60-65 and col. 8, lines 55-60, Puram et al. teach employers seeking to fill positions are entering data regarding the needs of the position. First, an employer identifies or selects skills that are desired for the position and then assigns to each selected skill a skill level or experience desired and the importance or priority of that skill. The system then groups the candidates into normative ranges. For example, the data returned to the employer would indicate that candidates A and B scored in the range of 90-100 percent, and candidate C scored in the 85-90 percent range and candidate D and E scored in the 80-85 percent range. The Examiner interprets the process is a ranking scheme.).
- **[Claim 8]** identifying a component of the current query having a narrowed range; and generating the proposed modification to indicate that the component having the narrowed range be relaxed (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-

- assessed skill levels. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool.).
- **[Claim 9]** identifying a component not appearing in the current query as required, wherein the component is associated with at least a certain percentage of job candidates matching the current query; and generating the proposed modification to indicate that the component not appearing in the current query as required be included in a new query as required (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. The Examiner interprets the process of adding skills to the list as identifying a component not appearing in the query and indicating that the component be included in the query.).
 - **[Claim 10]** identifying a component appearing in the current query as required, wherein the component is associated with a fewest number of job candidates matching the current query; and generating the proposed modification to indicate that the component appearing in the current query as required not be included in new query as required (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels.).
 - **[Claim 11]** generating the proposed modification comprises: identifying a set of skills associated with a primary role of a job requisition associated with the current query (col. 5, lines 60-65 and col. 7, lines 4-47, Puram et al. teach employers seeking to fill positions are entering data regarding the needs of the position. First, an employer identifies or selects skills that are desired for the position. After an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skills and skill level to fit the needs profile. If the number is too small, the system conducts the search again based on the self-assessed skill levels. If the number in this sub-pool is relatively large the employer is given

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the option to modify the needs profile such that it is likely to yield a smaller sub-pool.);

- ranking the skills in the set (col. 5, lines 60-65, Puram et al. teach employer identifies or selects skills that are desired for the position and then assigns to each selected skill a skill level or experience desired and the importance or priority of that skill.); and
- generating the proposed modification to indicate that a highest-ranked skill in the set not appearing in the current query be added to a new query (col. 7, lines 21-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill.).
- **[Claim 26]** determining whether a number of job candidates matching the criteria is outside a desired range indicating a desired number of job candidates to return, wherein the determining is performed by a computer (Abstract, Figures 3 and 4, and col. 7, lines 4-47, Puram et al. teach that the system selects candidates from a pool of candidates to fill a position based on the skills held by the candidate. Through automated data processing by a computer device, the candidates' records are searched to find a sub-pool of candidates that possess the skills listed by the employer as desired for the position. The search will only return those candidates whose skills profiles match or exceeds specified criteria. The search for a sub-pool may generate too many or too few candidates. The Examiner interprets that an upper and lower number is established in order for the system to measure and determine too many or too few.);
- responsive to determining that the number of job candidates matching is outside the desired range, generating new criteria based on a software-generated proposed modification to the criteria, wherein the generating is performed by the computer (col. 7, lines 4-47, Puram et al. teach that through automated data processing by a computer device, the candidates records are searched to find a sub-pool of candidates that possess the skills listed by the employer as desired for the position. A feedback process counts the number of candidates in the sub-pool and allows for modifications to yield a smaller or larger sub-pool. After an employer has entered their needs data, the system searches the candidate records and

counts the number of candidates who have the skills and skill level to fit the needs profile. If the number is too small, the system conducts the search again based on the self-assessed skill levels.); and

- repeating the determining and the generating steps up to a predetermined number of times, wherein the repeating is performed by the computer (col. 7, lines 4-51, Puram et al. teach that after an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile. If the number is too small the system conduct the search again based on the self-assessed skill levels. If the number in this sub-pool is still relatively large, the employer is given the option to modify the needs profile such that it is likely to yield a smaller sub-pool. For example, the employer may raise the level of skill required for a skill, add skills to the list, and/or raise the level of importance of a skill. Conversely, if the sub-pool is relatively small, the employer can adjust the needs profile to yield a larger sub-pool. Once a sub-pool of satisfactory size is identified, the next task is to determine which of the adequate candidates has skills and experience that most closely match what is needed or desired of the position. The Examiner interprets the process is repeated at least once, a predetermined number of times.).
- **[Claim 29]** storing the software-generated proposed modification, wherein generating the new criteria based on the software-generated proposed modification to the criteria comprises excluding previously generated stored software-generated proposed modification from the new criteria (col. 3, lines 29-39, col./ 6, line 6 to col. 7, line 67, Puram et al. teach data is exchanged between users and a server through the Internet. The server carries or is able to access one or more databases which store and process data about the candidates and the positions to be filled. Several processes are performed by the server or another computer, including gathering and interrogating data from candidates, gathering and interrogating data for candidates, gathering and interrogating data from employees about positions to be filled, and then searching the database to find and rank candidates whose qualifications suit the needs of the positions to be filled. The needs data entered by the employer for the position is stored in a storage medium that may be the same as, or in data communication with, the storage medium in which the candidates' skills data is stored. In the Data Matching Phase, once a sub pool of satisfactory size is identified, the next task is to determine which of the adequate candidates has skills and experience that most closely match what is needed or desired of the position. For each skill, the candidates' score is compared to the maximum score needed. If the candidates' score exceeds the maximum score, then the system generates an adjusted score for the candidate. If the candidates'

score does not exceed the maximum score, the adjusted score is equal to the actual score. The adjusted score is stored.).

Claims 2, 12, 24-25 and 27 substantially recites the same limitations as that of claims 1 and 26 with the distinction of the recited method being a computer-readable medium, a software-based system and system. Puram et al. teach an apparatus, system, and method to use relational databases or database files to store, sort, search, and otherwise "mine" stored data. Once an employer has entered their needs data, the system searches the candidate records and counts the number of candidates who have the skill and skill levels to fit the needs profile (col. 2, lines 36-43, and col. 7, lines 21-51). Hence the same rejection for claims 1 and 26 as applied above applies to claims 2, 12, 24-25 and 27.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Michael C. Heck whose telephone number is (571) 272-6730. The Examiner can normally be reached Monday thru Friday between the hours of 8:30am - 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (571) 273-6729.

Any response to this action should be mailed to:

**Director of the United States Patent and Trademark Office
P.O. Box 1450
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(571) 273-8300

[Official communications; including After Final communications labeled "**Box AF**"]

(571) 273-6730

[Informal/Draft communication, labeled "**PROPOSED**" or "**DRAFT**"]

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mch

24 October 2005

Susanna Diaz
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Primary Examiner
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